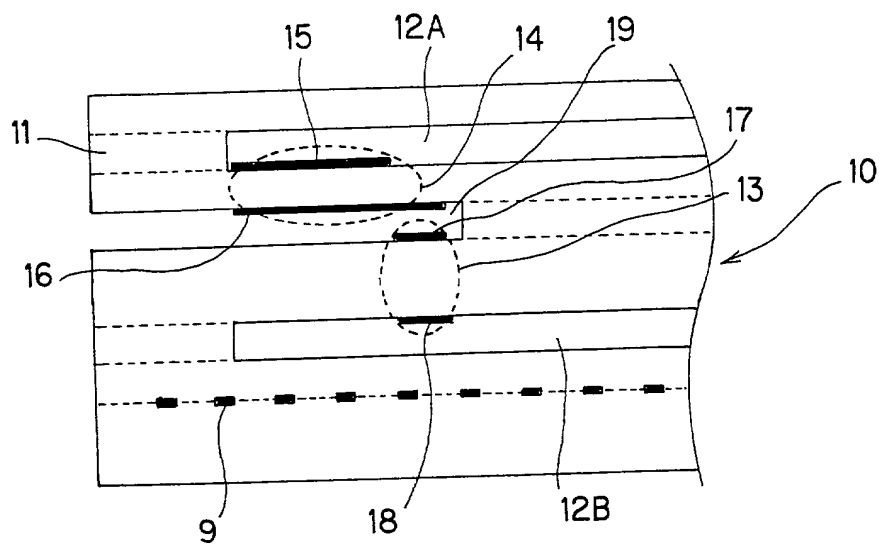


FIG. 1



FILED "TT621650"

FIG. 2

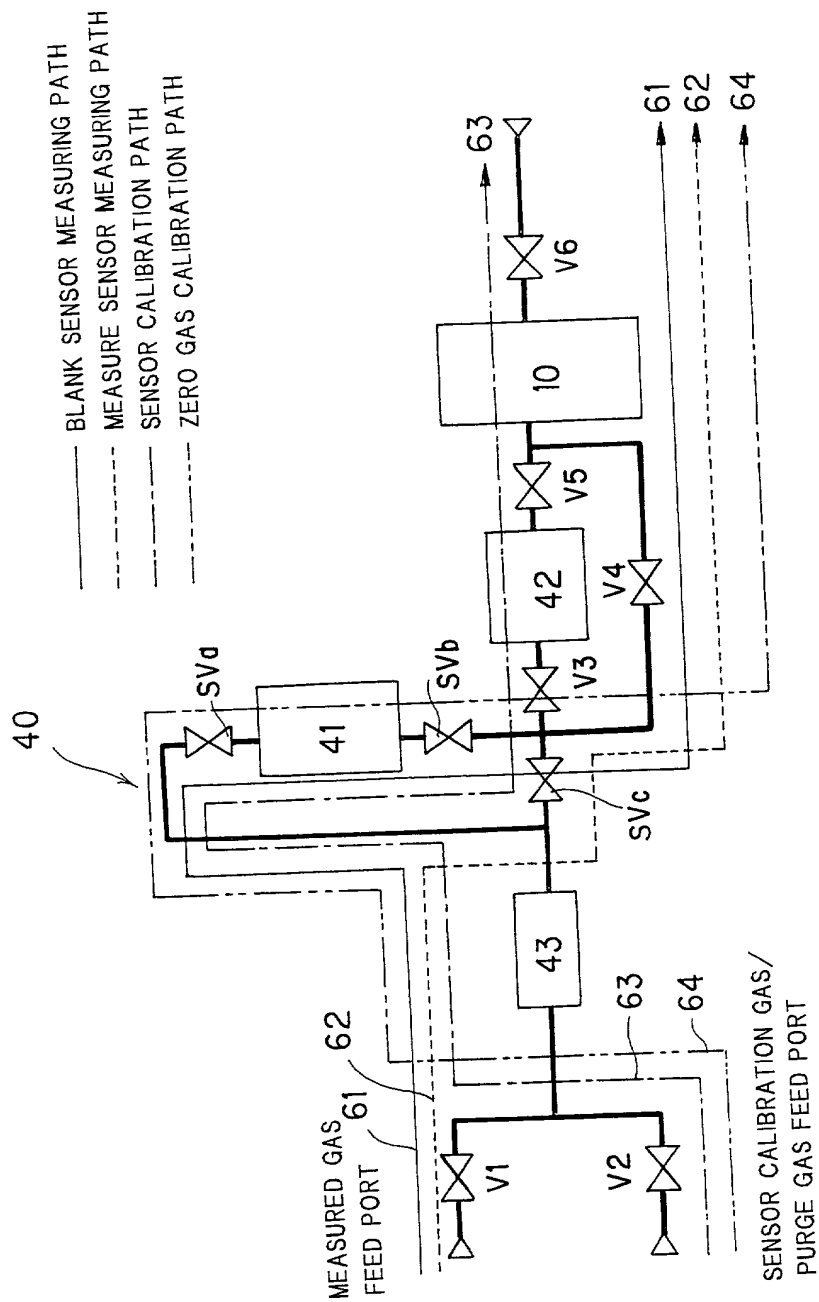


FIG. 3

BLANK SENSOR/MEASURE SENSOR 10

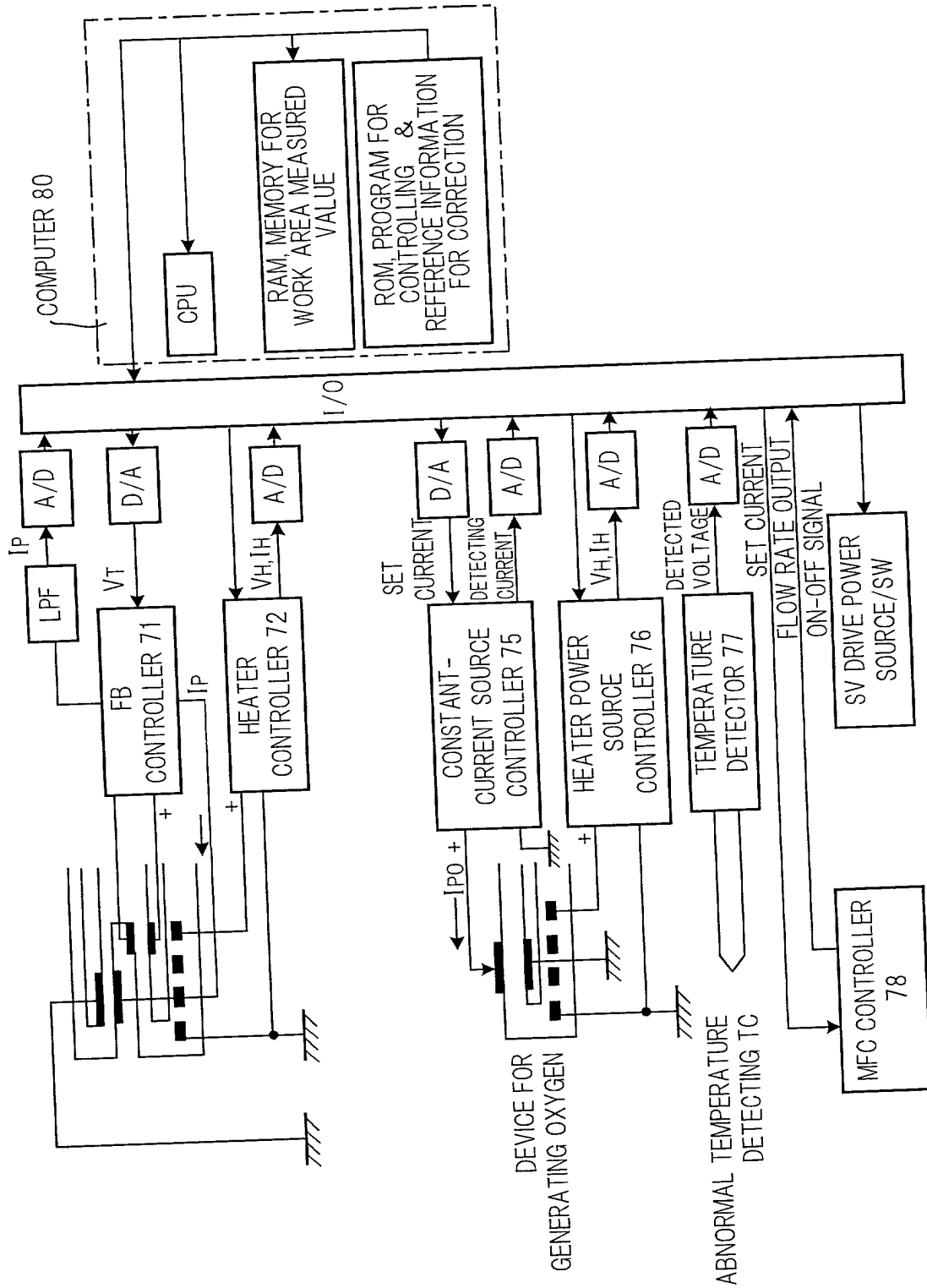


FIG. 4

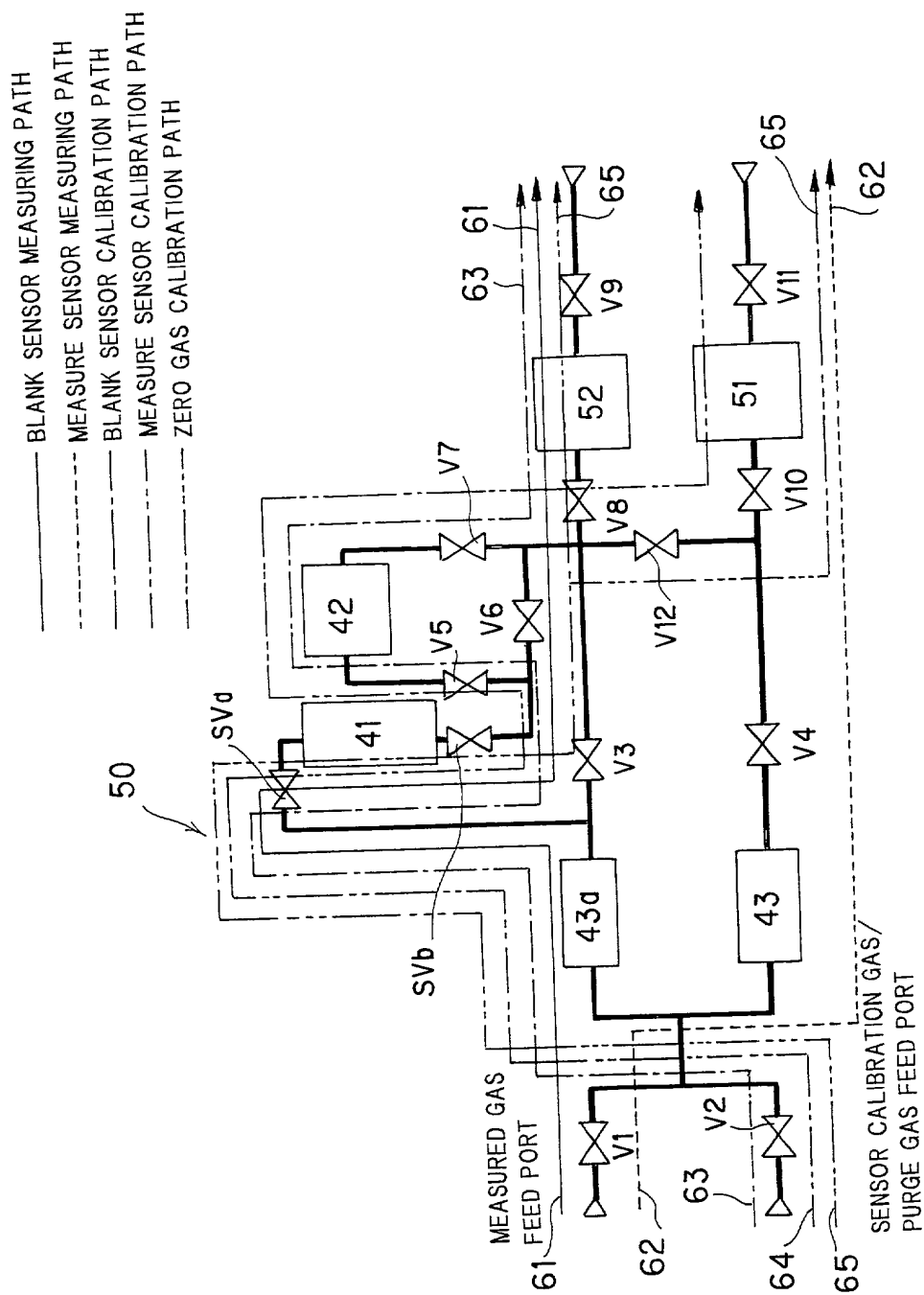


FIG. 5

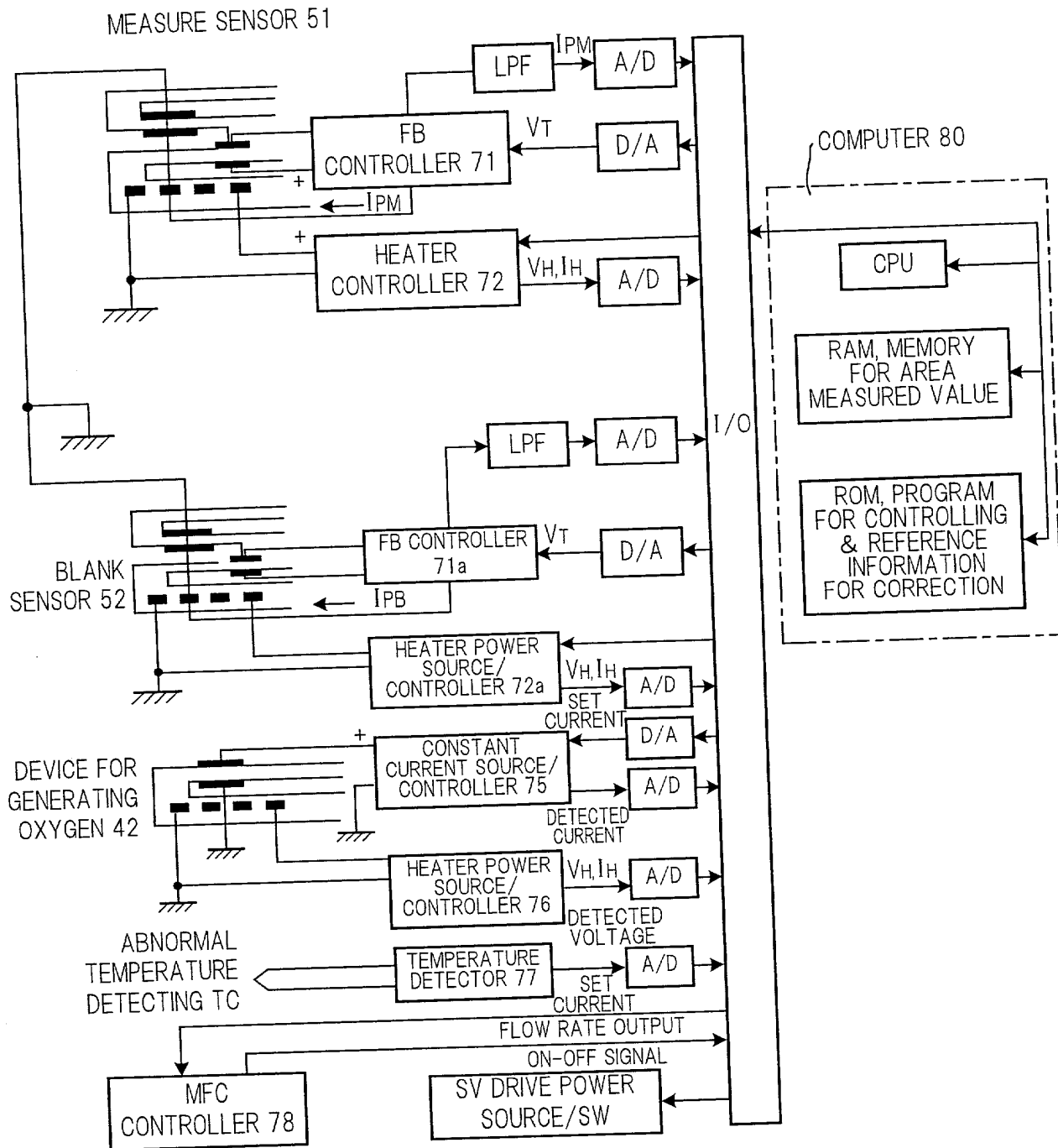
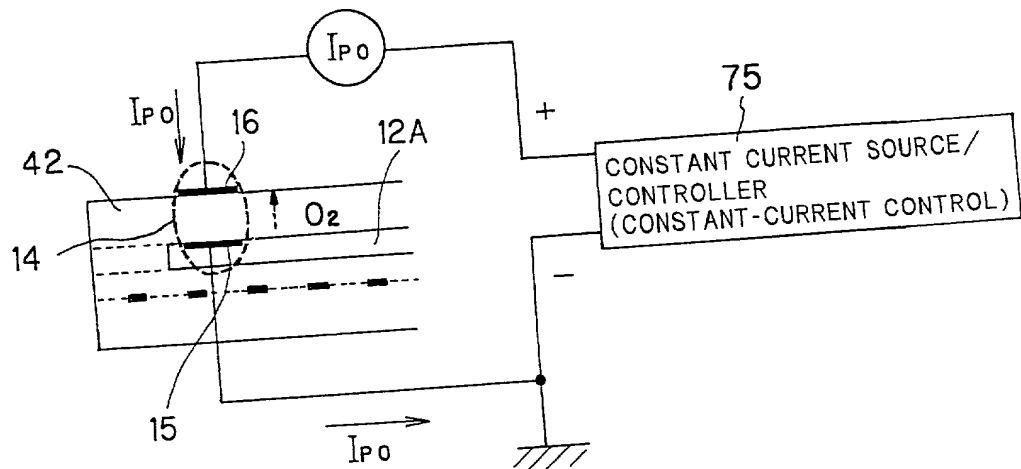


FIG. 6



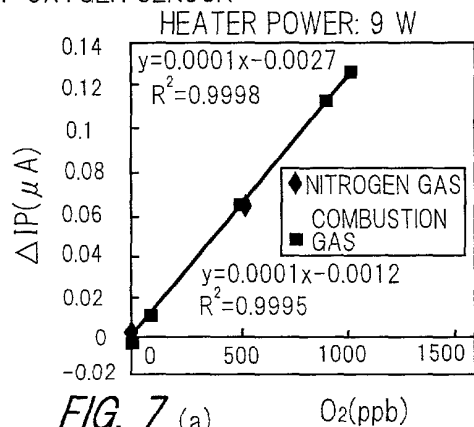
IP-O₂ CONCENTRATION CHARACTERISTICS OF OXYGEN SENSOR

FIG. 7 (a)

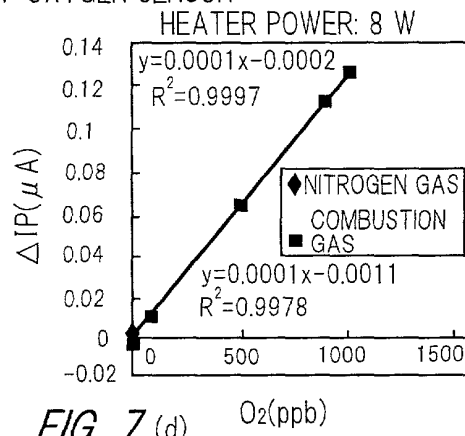
IP-O₂ CONCENTRATION CHARACTERISTICS OF OXYGEN SENSOR

FIG. 7 (d)

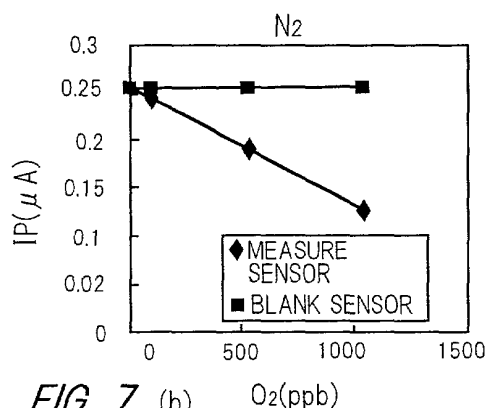
IP-O₂ CONCENTRATION CHARACTERISTICS OF NITROGEN GAS (9 W)

FIG. 7 (b)

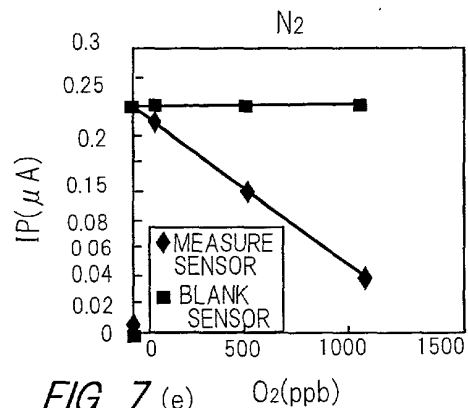
IP-O₂ CONCENTRATION CHARACTERISTICS OF OXYGEN SENSOR (8 W)

FIG. 7 (e)

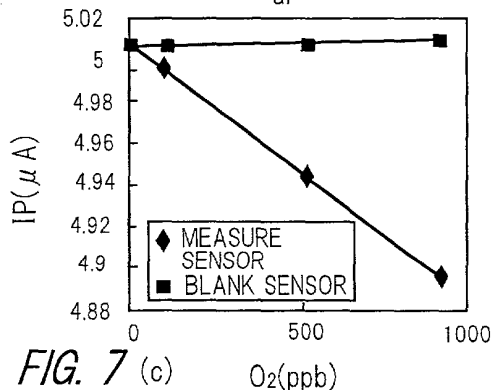
IP-O₂ CONCENTRATION CHARACTERISTICS OF COMBUSTIBLE GAS (9 W)
CO:10ppm, H₂: 10ppm, CH₄: 5ppm, N₂: Balance

FIG. 7 (c)

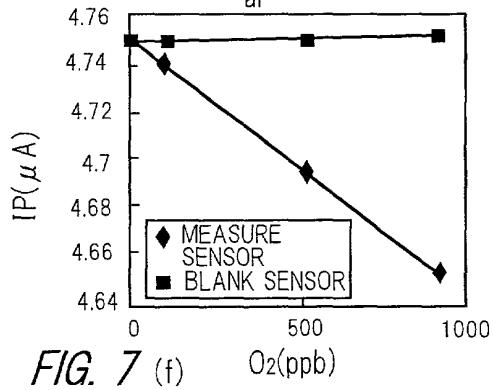
IP-O₂ CONCENTRATION CHARACTERISTICS OF OXYGEN SENSOR (8 W)
CO:10ppm, H₂: 10ppm, CH₄: 5ppm, N₂: Balance

FIG. 7 (f)

The schematic diagram illustrates a current mirror circuit. A reference current I_P flows through a resistor 14 and a diode 15 (labeled O_2). This current is mirrored to a load resistor 16, which is connected to a sensor element 17. The sensor element 17 is connected to a voltage source V_M (labeled 18). The voltage V_M is controlled by a feedback controller (71, 71a) which maintains a threshold voltage V_T . The current I_P is also shown flowing through a resistor 18.

FIG. 9

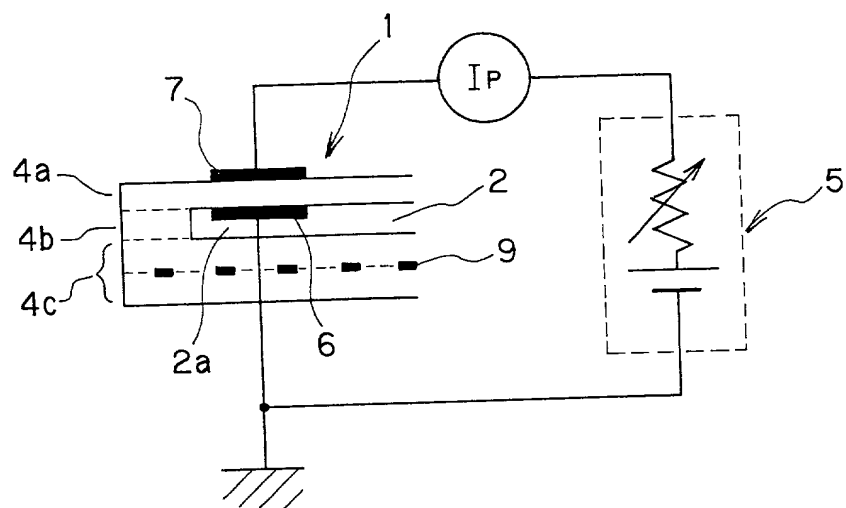


FIG. 10

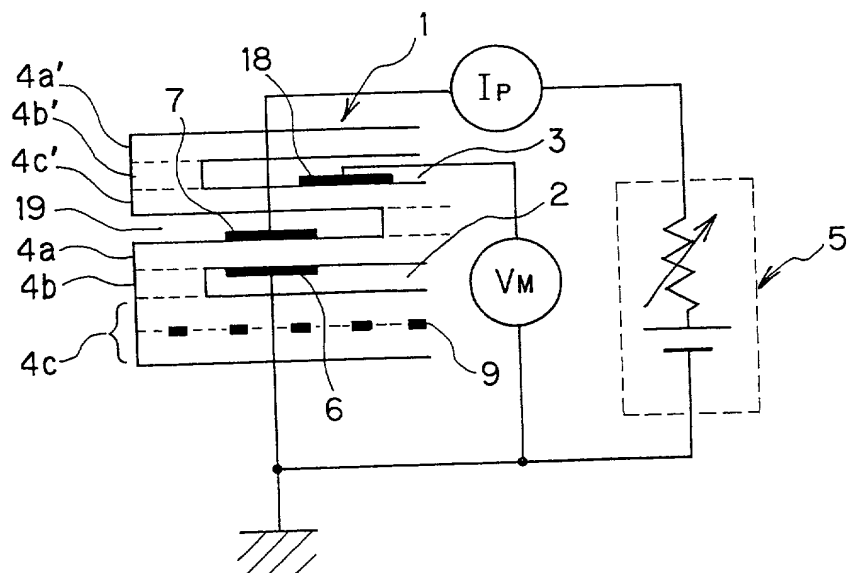


FIG. 11

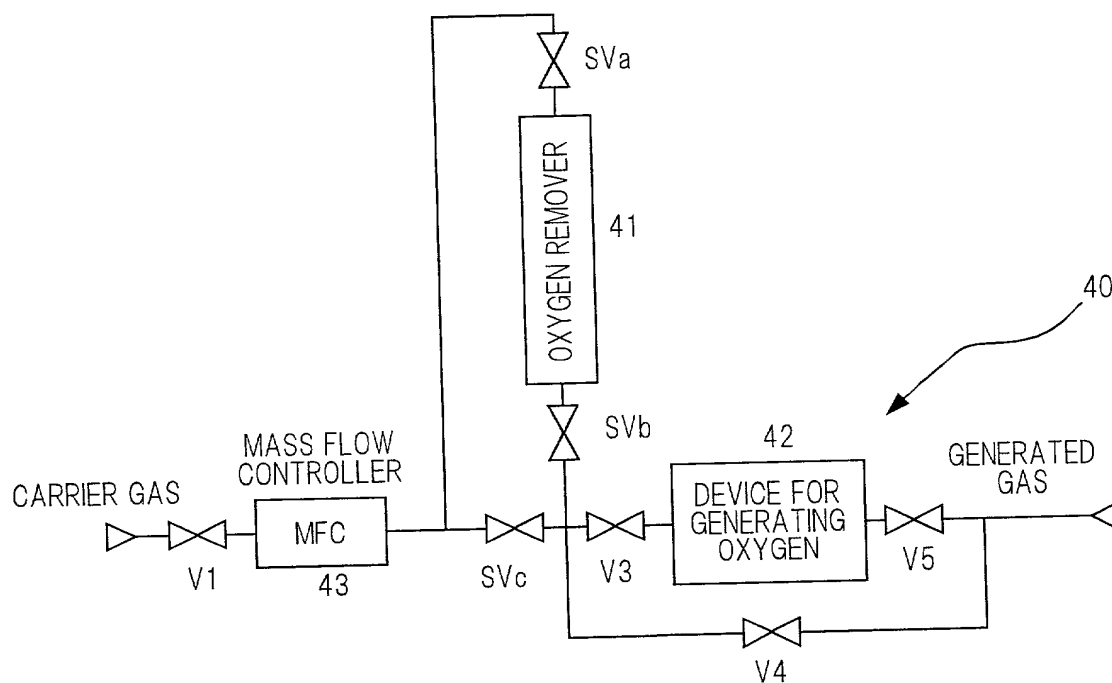
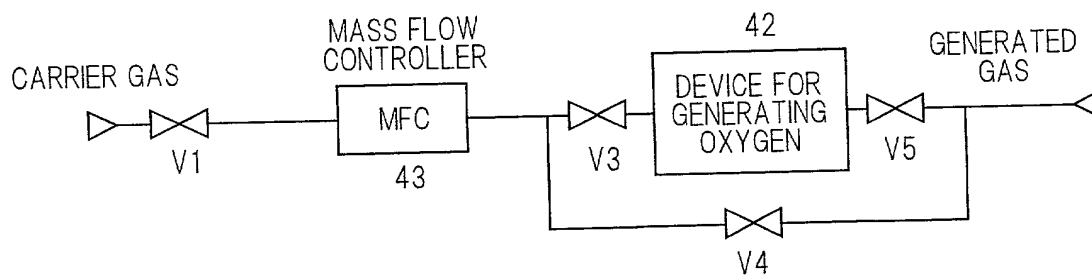


FIG. 12



The schematic diagram illustrates the gas supply system for the combustion furnace. It features two input streams: Air and Carrier Gas. The Air stream passes through valve V2, a Mass Flow Controller (MFC) 44, and valve V6. The Carrier Gas stream passes through valve V1, a Mass Flow Controller (MFC) 43, and valve V6. Both streams enter the Combustion Furnace 45. The output of the furnace is controlled by valve SVc and can follow two paths. Path 1 goes through valve SVb to an Oxygen Remover 41, then through valve SVa back to the furnace inlet. Path 2 goes through valve V3 to a Device for Generating Oxygen 42, then through valve V5 to become Generated Gas. A bypass line with valve V4 connects the output of the furnace directly to the input of the Device for Generating Oxygen 42.

FIG. 14

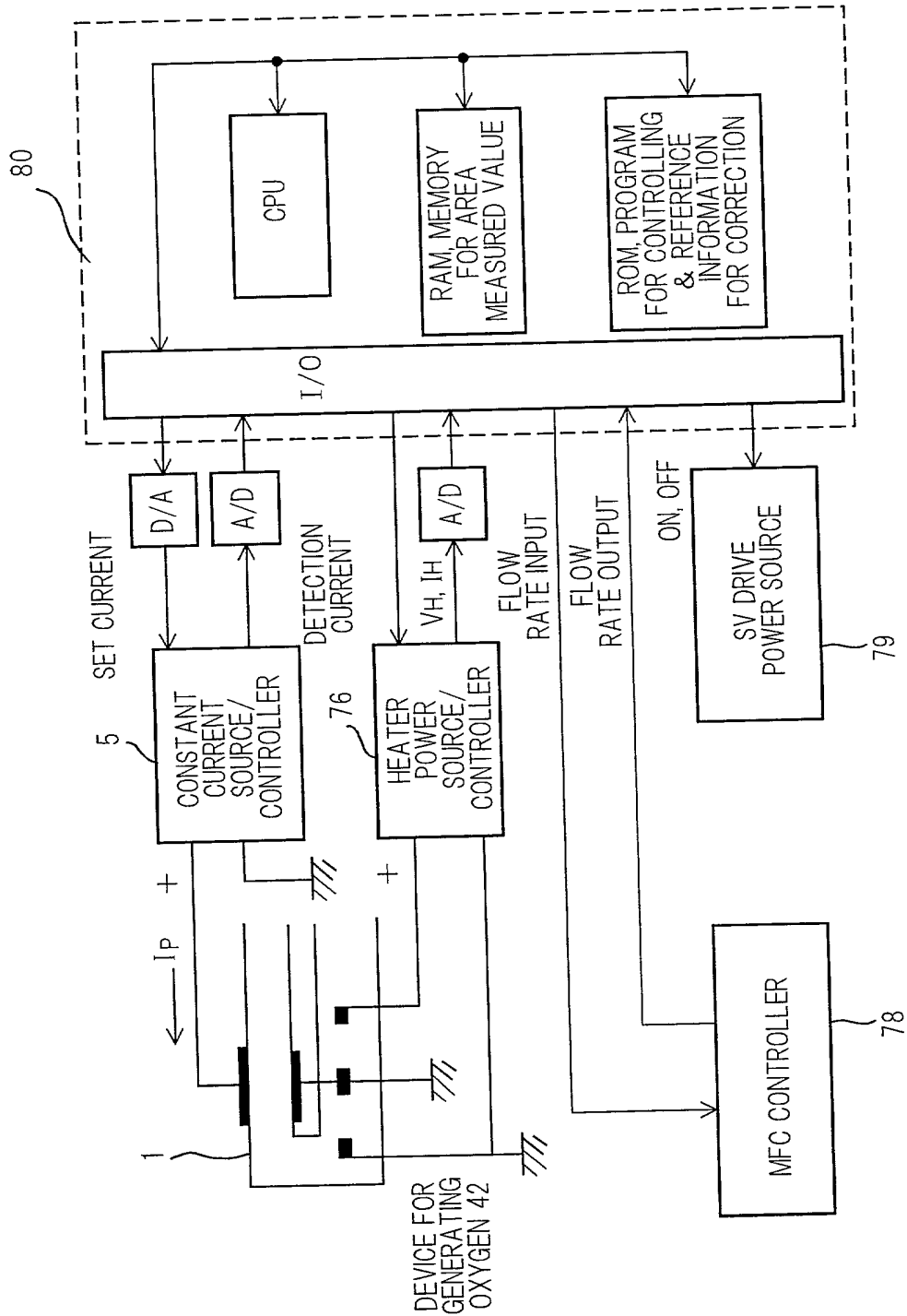
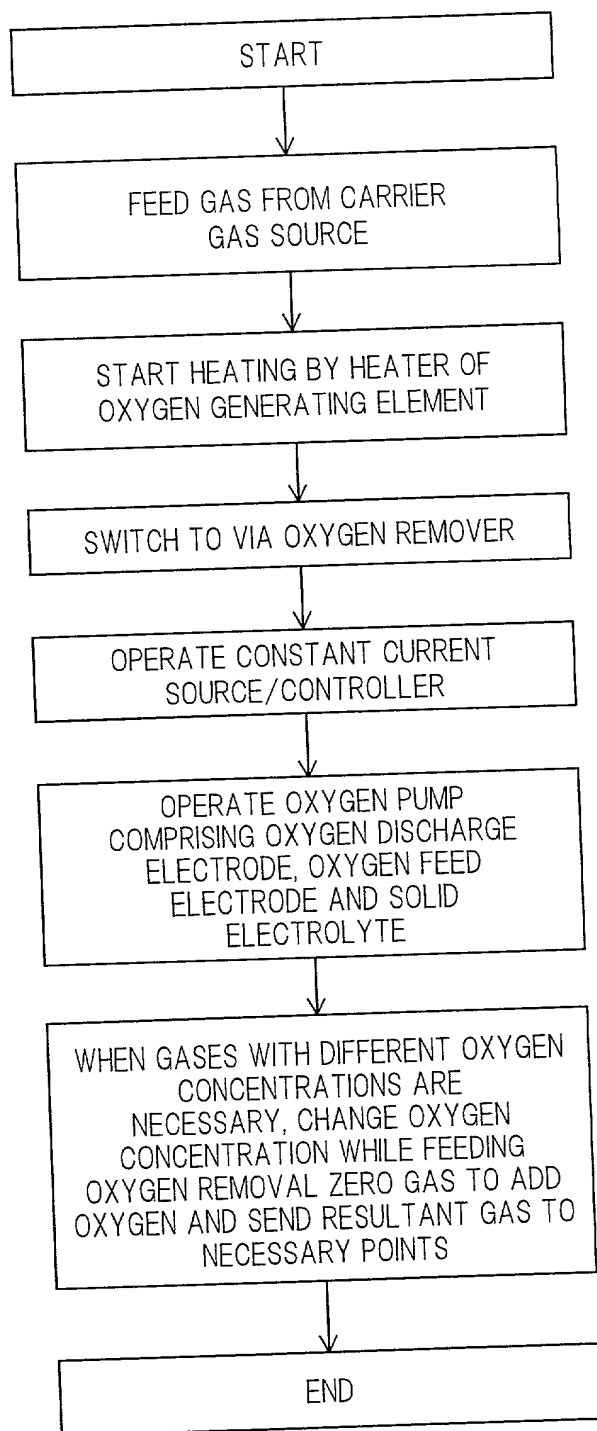


FIG. 15

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FIG. 16(a)

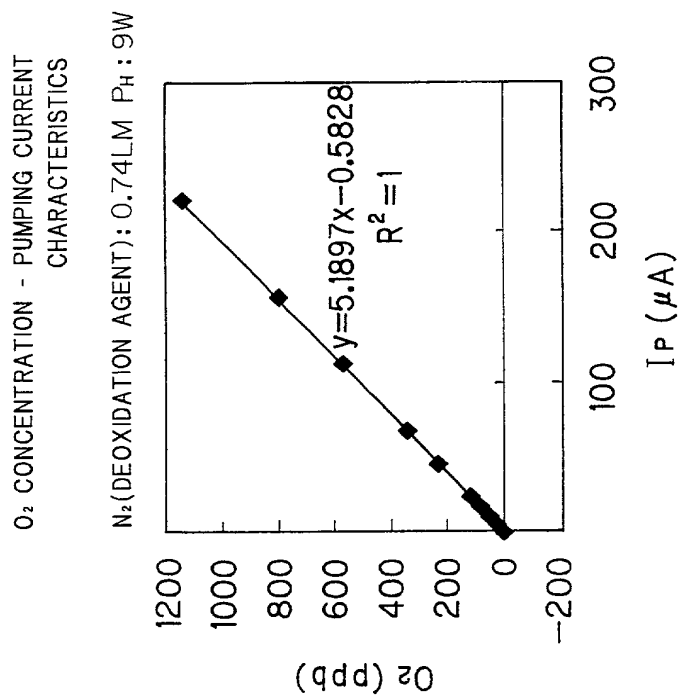


FIG. 16(b)

